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TOWARDS A THEORY OF EQUALIZATION PAYMENTS

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London - Canada

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This paper is part of a larger study being prepared for the Ontario Economic Council. On occasion reference is made to analysis which appears in other parts of the overall study. In general, however, the paper is self-contained. Comments are welcomed.

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I

INTRODUCTION

Horizontal and Vertical Balance

Kenneth C. Wheare in his highly respected treatise Federal Government concludes:

> There is and can be no final solution to the allocation of financial resources in a federal system. There can only be adjustments and reallocations in the light of changing conditions. What a federal government needs, therefore, is machinery adequate to make these adjustments.[1]

In terms of the Canadian federation, this generalization certainly appears to ring true. The many adjustments and reallocations, the changing conditions and the institutional machinery were dealt with in considerable detail in the previous chapter. The purpose of the present chapter is to attempt to pierce this web of financial practices in order to focus on the theoretical principles underlying intergovernmental transfers in a federal nation, and more particularly, to isolate the theoretical underpinnings of the equalization component of intergovernmental transfers.

Every federation has to grapple with the two perennial problems of intergovernmental finance, namely vertical and horizontal fiscal balance. Vertical fiscal balance relates to the allocation of revenues, relative to the allocation of expenditure responsibilities, between the provinces or states on the one hand and the federal government on the other. Horizontal balance relates to the relative fiscal capacities of the second tier of governments (i.e., provinces in Canada, states in the U.S.A., cantons in Switzerland, laender in West Germany, etc.). In terms of the former, the Canadian experience is probably typical of most federations. At the time of Confederation the importance of the expenditure responsibilities allocated to the provinces was rather minimal relative to those of the federal govern-

ment. Partly as a result, Ottawa was given the power to levy all manner of taxes and in particular was given exclusive jurisdiction over indirect taxes (including customs), the major source of revenues at the time.[2] The march of economic and social events altered all of this. The expenditure functions allocated to the provinces under the constitution--education, hospitals, welfare, highways, etc.--became progressively more important over the years. In part, this was due to the transfer of responsibility to the state for functions previously undertaken by the family or the church (e.g., welfare and to some extent education) and in part it was due to the advance of technology (e.g., the spread of the automobile and the corresponding need for highways, etc.). In any event, the provinces and their municipalities currently account for considerably more than 50 per cent of total government spending. Accompanying this trend toward the increasing importance of expenditure functions falling under provincial/ local jurisdiction has been an ongoing problem relating to the vertical distribution of revenues in the federation: Ottawa's share of revenues has over much of the post-war period tended to exceed its share of expenditure responsibilities. Apart from requiring the provinces to stay within their own budget constraints, (e.g., by borrowing, by increasing provincial taxes in order to meet the expanding demands for expenditures, or by paring expenditures on these functions) there are, in principle, three ways to handle this problem of vertical balance:

1. to transfer some expenditure functions to the federal government;
2. to transfer funds or tax room to the provinces with conditions relating to the manner in which these funds can be spent;
3. to transfer funds or tax room to the provinces in a no-strings-attached (i.e., unconditional) manner.

All three avenues have been utilized in the Canadian federation.

Since unconditional transfers can be spent when and where the provinces please, they are more consistent with a decentralized federation than either conditional grants or the transfer upward of expenditure functions. As a theoretical matter, one might want to argue that a transfer of an expenditure function from the provincial to the federal arena is much more of a "centralist" solution than is the adoption of a conditional grant. But, as a practical matter, there may be little difference between

the two since condition-laden intergovernmental transfers can effectively emasculate provincial autonomy with respect to the expenditure category in question.[3] However, this is not the place to elaborate on the interaction between centralization and decentralization on the one hand and the design of intergovernmental transfers on the other.[4] Suffice it to say that in the Canadian federation, where judicial interpretation of the Constitution has assigned greater power to the lower levels of government than has been the case in the United States, intergovernmental grants have tended to be of the unconditional variety relative to those in the U.S., thereby enhancing the more decentralist character of our federation. This relationship can go both ways. On the one hand, unconditional grants enhance provincial autonomy while, on the other, judicial interpretation in favour of the states or provinces may tilt the nature of intergovernmental grants in the unconditional direction.

Why all this concern relating to vertical balance in a federalism when equalization payments are designed to correct horizontal imbalance? The reason is that the distinction between horizontal and vertical balance is not as clear-cut as one might expect. In correcting for vertical imbalance by means of intergovernmental grants, the federal government can follow two quite different routes. U.B.C.'s Anthony Scott refers to these two differing approaches as the <u>principle of derivation</u>, and the <u>principle of equalization</u>.[5] Under the former, intergovernmental grants are paid to the provinces in relation to the amounts of federal revenues generated in these provinces. Thus, if Ottawa transfers additional income tax points to the provinces according to the principle of derivation, the revenues received by the provinces are determined by the yield of the tax points <u>within</u> their respective jurisdictions. Almost invariably, this approach to rectifying a vertical imbalance in a federation will generate a substantial horizontal imbalance since, as Scott notes, the principle of derivation is, "in essence...a negation of geographical redistribution".[6]

Not so if the "principle of equalization" underlies the solution to vertical balance. Scott defines the principle of equalization (not to be confused with Canada's formal equalization program) to mean that the vertical intergovernmental transfers are related not to the amounts of money derived from these provinces but are, rather, distributed to the provinces in a more equal fashion. One obvious example would be to transfer funds on an equal-per-capita basis (which, in essence, is what now occurs under the Established Programs). With the principle of equal-

ization underlying vertical intergovernmental grants, it is less likely that a resulting horizontal imbalance will be generated.

Intergovernmental grants are, of course, not the only potential source of horizontal imbalance. More important in the Canadian federation are the provinces own sources of revenues, particularly resource-related revenues. In most federations there exist formal programs, generally referred to as equalization programs, which are designed specifically to offset this horizontal imbalance in revenue across provinces or states.

With this as backdrop we now turn to the purpose of the present chapter--to attempt to provide some theoretical justification for the existence of equalization payments. It is important to note that by "theoretical justification" we do not have in mind only economic arguments. Indeed, to emphasize this point, the analysis will begin by focusing on some non-economic arguments that underlie Canada's equalization program. Since the paper is quite long a brief overview of its contents follows.

Overview of the Chapter

Drawing liberally from the Rowell-Sirois Report, the analysis begins by focusing on what we refer to as the federal (or constitutional) and nationhood rationales for equalization. The former justification for equalization payments is based on the argument that they are essential in order that all provinces have funds adequate to undertake the responsibilities allocated to them under the constitution. The latter calls for equalization on grounds that there is some level of essential services to which all Canadians, regardless of their province of origin, are entitled. To be sure, there is a very fine line between these rationales and the notion of the "fiscal equity" or "horizontal equity" that often forms the basis for the economic rationale for equalization. But it is precisely this line that we are attempting to draw in this chapter.

With Section III, the analysis shifts to the economic underpinnings of equalization, focusing first on the relationship between economic efficiency and equalization. A system of equalization payments inhibits interprovincial mobility. About this there is little doubt. The relevant question is under what conditions will impeding migration be efficiency enhancing and under what conditions will it be efficiency retarding. The efficiency case rests on the notion that without a system of payments to equalize the differential fiscal benefits arising from the operations of

provincial budgets internal migration might well be triggered by fiscal rather than market criteria. The analysis proceeds by focusing on a series of alternative assumptions (e.g., benefit taxation, provincial budgets redistributive) with respect to the operation of provincial governments and for each of these scenarios examines the efficiency case for equalization.

Section IV extends the efficiency rationale to incorporate the existence of provincial resource rents. As was clear from Part II of this study, concern over the treatment of resource revenues is at the heart of most of the problems besetting Canada's equalization program. The case for equalization on efficiency grounds is strongest where there are large differences in net fiscal benefits across provinces and, not surprisingly, energy or resource revenues are the principal source of these large variations.

In Section V the focus switches to the equity arguments for equalization. While the notion of horizontal equity is commonly accepted as a public finance maxim, it is not obvious how it ought to be viewed in the context of a federal nation. Accordingly, the analysis deals in turn with "broad-based" horizontal equity (which essentially lumps all governments together and, in effect, conducts the discussion in the context of a unitary state) and "narrow-based" horizontal equity (which recognizes the federal nature of the country and assumes that the federal government takes as given the distribution policies of the respective provincial governments). The implications arising from these two approaches to equity differ markedly: broad-based horizontal equity calls for the same sort of equalization program as does the efficiency criteria whereas narrow-based horizontal equity, in the absence of resource rents, would generally call for no equalization program at all. The section concludes with our own, rather negative, views of the role that should be assigned to the conventional equity case for equalization.

Since the recent theoretical work relating to resource rents and equalization has generated so much recent interest, Section VI is devoted to outlining some of the assumptions and reservations that ought to be kept in mind in the transition from theory to application.

The final substantive section focuses on some of the empirical work related to the efficiency underpinnings of equalization. Are net fiscal benefits a major determinant of internal migration? If so, then one is prepared to accept the fact that some migration may be inefficient. Do

equalization payments inhibit outmigration? If the answer is yes, then equalization payments might be efficiency enhancing. Section VII examines what the recent empirical literature has to say about these issues.

Rather than summarizing the analysis, the conclusion addresses two sets of issues. First, what sorts of equalization programs would be called for by the various rationales discussed above and, second, how do they compare with Canada's existing equalization program.

II
NATIONHOOD AND CONSTITUTIONAL RATIONALES FOR EQUALIZATION

It is commonplace nowadays to rationalize equalization flows in terms of the dual criteria of economic efficiency and fiscal equity, particularly in the face of the substantial resource rents in some provinces. Failure to provide some equalization in the presence of these rents may imply that both labour and capital will become "too" mobile, i.e., mobility will be motivated by the desire to capture a portion of these resource rents. To use the current jargon migration will be "fiscally-induced" or "rent-seeking". The end result may be a misallocation of factors of production across jurisdictions. Interestingly enough, however, economic arguments (which will be elaborated below) did not appear to play a very important role in the Rowell-Sirois Report that led to the recommendation for National Adjustment Grants (essentially equalization payments). Rather, there appeared to be a much greater reliance on what, for want of better terms, we refer to as nationhood and federal/constitutional arguments for equalization.

To be sure the Report did emphasize that the "tax jungle" of the 1930s was wreaking havoc with national efficiency. And in the midst of financial collapse some poorer provinces were literally forced to extract taxes from every possible source, the result of which was also to generate economic inefficiency and to reduce national output. Nonetheless, it appears that to a very considerable degree the Report's equalization proposals were motivated by political (nationhood) and constitutional (federal) principles.

Equalization as the Cornerstone of a Federal System
(The "Federal" Rationale)

The Rowell-Sirois Report is frequently criticized for being a very "centralist" document. And in part it was, recommending as it did the

transfer to the federal level of all direct taxation. However, the Report also represents one of the most eloquent defences for provincial autonomy in those expenditure areas assigned to the provinces under the Constitution. Moreover, in the view of the Report, it is precisely by means of the National Adjustment Grants (equalization payments) that provincial autonomy ought to be meaningfully secured:

> They (the National Adjustment Grants) illustrate the Commission's conviction that provincial autonomy in these fields must be respected and strengthened, and that the only true independence is financial security. ...They are designed to make it possible for every province to provide for its people services of average Canadian standards... They are the concrete expressions of the Commission's conception of a federal system which will preserve both a healthy local autonomy and build a stronger and more unified nation.[7]

The Report goes on to point out that the issue of horizontal fiscal imbalance was not a major concern in 1867, particularly in the light of the specific subsidies that were incorporated in the BNA Act. However, over time, conditions altered markedly and the initial conception of subsidies had to be replaced by a more comprehensive and logical approach (i.e., the National Adjustments Grants):

> The implications for public finance of the economic and social changes which have occurred in Canada are of far-reaching importance. As a result of the transcontinental economy which was deliberately built up, with its notable concentration of surplus income, and later as a result of the disintegration of this economy [because of the depression and the ensuing tax jungle] no logical relationship exists between the local income of any province and the constitutional powers and responsibilities of the government of that province.[8]

One obvious solution would have been to recommend a transfer of these powers and responsibilities from the provinces to the federal government. The Report does not opt for this alternative. Indeed, as noted above, it mounts a staunch argument for continued provincial control of these expenditure functions. Moreover, it argues that in order to guarantee provincial autonomy, the proposed National Adjustment Grants must be unconditional in nature:

> It should be made clear that while the adjustment grant proposed is designed to enable a province to provide adequate services (at the average Canadian standard) without excessive taxation (on the average Canadian basis) the freedom of action of a province is in no way impaired. If a province chooses to provide inferior services and impose lower taxation it is free to do so, or it may provide better services than the average if its

people are willing to be taxed accordingly, or it may, for example, starve its roads and improve its education, or starve its education and improve its roads--exactly as it may do today. But no provincial government will be free from the pressure of the opinion of its own people... .[9]

and

They [the National Adjustment Grants] are given when a province cannot supply average standards of certain specified services without greater than average taxation, but the province is free to determine on what services the grants will be spent, or whether they will be used not to improve services but to reduce provincial (and municipal) taxation. It may be assumed that there will be strong public pressure to improve those services which are below the Canadian average once the necessary funds are available but it is the Commission's view that the extent to which this is done and the method by which it is done (i.e., either by direct provincial expenditures or by subsidies to municipalities) can best be determined by the provincial electors and their representatives.[10]

As a final comment on the Commission's emphasis on the role of equalization payments in providing the financial independence needed to ensure a province's ability to fulfil its constitutional responsibilities as well as the necessity for these payments to be unconditional in form, the following quote is particularly apt:

The Commission's Plan [for National Adjustment Grants] seeks to ensure every province a real and not illusory autonomy by guaranteeing to it, free from conditions or control, the revenues necessary to perform those functions which relate closely to its social and cultural development.[11]

Equalization as a Means of Attaining the Full Rights of Canadian Citizenship (The "Nationhood" Rationale)

Existing side by side with the federal or constitutional rationale for equalization payments is a national unity or nationhood rationale. Canadians, wherever they live, ought to have access to certain basic economic and social rights--rights which, as it were, ought to attend Canadian citizenship:

The constitutional division of taxing powers, applied to the existing regional distribution of taxable income, has produced surpluses in some provincial budgets, and in others deficits which have inevitably been reflected in reductions of those community services which Canadians have come to look on as the minimum which their governments should supply. As a result, Canadian citizens in some provinces are receiving educational, health and other social services much inferior to those in other provinces and (quite apart from any question of governmental extravagance or the provision of unusually costly services) Canadian citizens in some provinces

are required to contribute a much larger portion of their income to the government of the province than those in other provinces.[12]

Even more revealing is the following excerpt:

In considering the relative fiscal needs of provincial governments, we are mainly concerned with a few divisions of their expenditures: on education, on social services, on development. It is of national interest that no provincial government should be unduly cramped in any of these respects. Education is basic to the quality of Canadian citizens of the future and it is highly undesirable that marked disparities in the financial resources available for education should exist as between Canadian provinces. Social services, like education, cannot be subjected to marked disparities without serious reactions on the general welfare and on national unity. An appropriate developmental policy is required in each province, and the only standard which can fairly be applied is the policy of the province itself...[13]

A final quote from the Report puts more emphasis still on the national unity issue:

It is important to note that some of the provinces are quite unable to meet their obligations and at the same time provide the social and educational services which Canadians have come to look upon as essential. Such a situation cannot leave other provinces unconcerned. The investors in other provinces will suffer in the case of private or public insolvency among their neighbours. The producers in other provinces might suffer if markets are destroyed. Migrants must be admitted from depressed provinces, and it is not merely a nuisance and an expense but a positive danger to the more prosperous provinces if the migrants are illiterate or diseased or undernourished. Nor is the danger of competition from substandard labour in a distressed province a peril which can be disregarded. More important than all these considerations taken together is the danger to national unity if the citizens of distressed provinces come to feel that their interests are completely disregarded by their more prosperous neighbours, and that those who have been full partners in better times now tell them they must get along as best they can and accept inferior educational and social services.[14]

It is appropriate to note that while these two approaches are quite closely related the implications for equalization are somewhat different. In particular, the nationhood rationale probably calls for conditional grants related to the achievement of certain levels of basic services. The transfer associated with the Established Programs would appear to satisfy the "nationhood" rationale. Although not formally viewed as an equalization program, the equal-per-capita transfer embodied in the EPF program does embody an equalization feature. This was, of course, a theme that ran through the previous chapter, namely that the formal equalization program is not the only way of dealing with the horizontal imbalance in our feder-

ation. Note also that the argument for unconditional transfers derives principally from the federal rationale.

The National Adjustment Grants

When combined, these two approaches lead rather naturally to the Report's recommendation for a set of unconditional National Adjustment Grants. By itself, the nationhood rationale could, as noted above, be satisfied by equal-per-capita grants tied to the provision of those basic services that are essential to nationhood. However, in tandem with the federal rationale, which respects the provinces' constitutional expenditure responsibilities, the logic points rather clearly in the direction of making any such payments unconditional in nature. Moreover, as noted in the previous chapter, the calculations underlying the proposal for National Adjustment Grants took account of what it would likely cost to provide the essential or basic services in each province (which may not be an identical dollar amount per capita, so that some recognition of fiscal need is incorporated) in relation to the provinces' capacity to raise revenues. Thus the emphasis was on providing services at the Canadian average level without taxation unduly above the Canadian average level. This is of considerable interest because some of the economic justifications for equalization developed below do not rely on such things as basic levels of services or unduly high tax rates, vague as these notions may be.

To this point, the emphasis has been on the non-economic arguments underlying the National Adjustment Grants. However, this does not mean that one could not defend these grants on economic grounds. Nor does it imply that one cannot find a generous sprinkling of economic principles in the above quotations from the Report. For example, some economists might prefer to interpret the federal/constitutional rationale in terms of the public finance concept of horizontal equity--individuals alike in other respects should not bear differential fiscal burdens depending on their province of residence in order to receive a given bundle of government services. Similarly, the citations from the Report with respect to the nationhood argument can easily be read to incorporate the notion of interprovincial spillovers or externalities and even fiscally-induced migration. Nonetheless, from our reading at least, the Royal Commission appears to be relying more on arguments that relate to constitutional federalism and the rights of citizenship than on arguments that derive from individual

maximization or economic efficiency. Be that as it may, the remainder of the chapter will focus on the economic case for equalization.

III

EFFICIENCY AND EQUALIZATION: THE NET FISCAL BENEFIT (NFB) APPROACH

The Fiscal Equity Concept

The traditional economic argument for equalization derives from the notion of "fiscal equity". While this is a rather imprecise term, most economists would accept some variant of John Graham's elaboration of the principle:

> The principle of fiscal equity is based in turn upon--indeed is an extension of--the widely accepted principle of horizontal equity, i.e., of equal treatment of equals...the rationale for applying this principle is twofold. First, since the fiscal capacity (tax base) of provinces and localities will inevitably vary, because of differences in resource base, location, occupational mix, etc., equalizing fiscal transfers are necessary to eliminate differential fiscal pressures which otherwise would encourage the movement of well allocated resources from low- to high-income provinces and localities and impede the movement of resources from high- to low-income provinces where they would be more productively allocated. This is the economic argument.
>
> Second, if citizens are, by and large, to distribute themselves most productively in a nationally integrated economy, their fiscal treatment should not be dependent upon the fiscal capacity of the province or municipality in which they happen to be located. This is an ethical argument the affirmation of which by all provinces and citizens help to bind the country together and provide a basis for national unity.[15]

Hence, fiscal equity has two components--an efficiency aspect and an equity aspect. We shall deal with the former first, in the context of a model that is based on individual maximization.[16]

Comprehensive Income and NFB's

Consider the precepts underlying the neoclassical model, assuming initially that there is no government sector. Individuals (or families) are assumed to be rational maximizers, armed with sufficient knowledge pertaining to

both product and factor pricing. Markets are assumed to be characterized by pure competition so that prices for products reflect marginal values to consumers and factors are paid in accordance with their marginal productivities. Transactions costs and mobility costs are assumed to be negligible. Within such a paradigm, resources will be optimally allocated and welfare will be maximized.

Now let us introduce a public sector. Initially, let this take the form of a single national government (i.e., a unitary state). The government is assumed to treat similarly situated citizens in a similar manner (i.e., horizontal equity prevails). The efficiency criterion is that factors be paid their marginal products and that these marginal products are everywhere the same. With factor mobility this will lead to an efficient allocation of economic activity over space. The actions of the government may give rise to some resource adjustments since neither taxes nor expenditures are likely to be allocatively neutral, but there will be little impact on the geographical allocation of economic activity since the central government is assumed to treat like citizens in a like manner and we are ruling out major government initiatives which might arbitrarily construe an advantage on certain sections of the country. If rents exist, they are assumed to be able to be captured by the central government so that they will benefit all citizens irrespective of where they happen to reside.

The next step is to assume the presence of a federal rather than a unitary state. Each province will now offer its residents a bundle of public services and these bundles will likely vary across provinces, corresponding to the preferences of citizens of the various provinces. At this juncture, it is convenient to introduce the notion of "comprehensive income", defined as market sector income plus "net fiscal benefits" (henceforth termed NFB's) generated by the actions of the provincial governments. NFB's are the difference for individuals between benefits received from provincial government operations[17] (essentially expenditures) and the costs imposed on them for the provision of these services (essentially, taxes). Obviously NFB's can be either positive or negative. If provincial governments engage in substantial income redistribution it is likely that within a province the NFB's will be positive for some groups of individuals and negative for others. And for provinces which have access to substantial resource rents, NFB's can be positive for <u>all</u> groups within the province.

A rational economic agent will maximize his/her comprehensive income.

Hence, in choosing among otherwise identical jobs, an individual (or family) will opt for the province where the NFB's are the highest. Recall that the underlying assumption is that mobility costs are negligible. Indeed, if NFB's are higher in one province than in the others, the individual would be willing to take up employment there even at a lower paying position provided the comprehensive income level is higher. In the face of persistent differences in NFB's, migration will occur so as to alter marginal productivities such that marginal comprehensive income will be everywhere identical in the long run. What this implies is that, other things equal, the nominal wage rates for identical jobs will be lower in provinces with higher NFB's.

While migration in response to NFB's is optimal behaviour on the part of the individual it is not optimal from the vantage point of the nation because factors are no longer being allocated in a pattern consistent with the efficiency criterion for optimal resource allocation. In the economics literature such migration has come to be referred to as "fiscally-induced" or "rent-seeking", the latter term focusing on the fact that rents are likely to be the principal source of differing NFB's.[18] How can this situation be remedied? Quite obviously, in order that marginal productivities call the allocation tune, NFB's must be equalized. Hence, on efficiency grounds, NFB's across provinces should be equalized.

This leads to two important questions. First, what are the likely sources of these differing NFB's across provinces? and second, is an equalization program a possible vehicle for offsetting these differences in NFB's? The latter issue is dealt with first.

Equalization as a Means of Ensuring Fiscal Efficiency

Equalization payments are designed to go to provinces, not to individuals. Yet the logic of the above analysis is that the fiscal efficiency concerns relate to individuals. Hence, from an efficiency standpoint the first-best solution to differing NFB's across provinces is a system of differentiated interpersonal, not interprovincial, grants. This is a point that is recognized by Boadway and Flatters. However, they argue that this "first-best" solution has its own problems:

> Why use a system of intergovernmental rather than interpersonal transfers? First, to calculate NFB's on an individual taxpayer basis would be very difficult, costly, and controversial. Second, and more important, to

implement an interpersonal rather than an intergovernmental equalization program could amount to the federal government overriding all redistribution decisions of provincial governments.[19]

Some evaluation of these points is warranted. In principle, one would want to include these NFB's as part of the individual's income for tax purposes. However, they are not treated as taxable income. Hence, one can argue that the first-best solution is to tax comprehensive income, not to set in place a set of equalization payments to provinces. Thus, even though one can isolate a fiscal inefficiency in the presence of multi-level governments, the case of remedying this by a set of payments to governments is very much a <u>second-best</u> approach, to fall back on economists' jargon. So, too, is the view that these payments ought to be unconditional, since a finely tuned system of conditional payments to provinces could be made a close equivalent to a set of differentiated payments to individuals and, hence, a first-best solution. Unconditional grants may provide the <u>potential</u> for eliminating or reducing NFB's, but whether this potential is realized will depend on how the provinces utilize these funds. Finally, the thrust of the efficiency approach is to "eliminate" the differential NFB's. This requires some sort of interprovincial revenue sharing pool. Merely to bring up poor provinces' NFB's to some average level would not solve the efficiency problem. In short, a set of unconditional equalization payments does not follow directly from the individual maximization process underlying the efficiency case. This does not mean that an equalization system would not move the system toward increased efficiency. What it does mean is that efficiency considerations <u>alone</u> would not lead one to the type of equalization program that has characterized our federation.

Nonetheless, it is important to isolate the manner in which multi-level governments can give rise to fiscal inefficiency. To this we now turn.

<u>A Taxonomy of the Sources of Provincial NFB's</u>

To obtain a better appreciation of just what is at stake in attempting to equalize NFB's, it is instructive to focus on some of the various ways in which differing NFB's across provinces can arise. As we shall see, by far the most significant factor is the existence of rents, particularly from natural resources. However, the discussion of the role of rents is delayed until later in the chapter. The present section proceeds under the assumption that such rents are absent from the system.

Provinces Adopt Benefit Taxation

Benefit taxation is defined as a system under which each resident is taxed an amount exactly equal to the value of public sector output he/she consumes. As is noted in a recent paper dealing with the economic basis for equalization:

> The stringent nature of this condition [benefit taxation] is evident in the fact that the analogy to private goods is complete, except that the government supplies the output rather than a private firm. A new resident will need extra public sector goods produced for him specifically, and he can expect to be charged the maximum price which is equal to the value he places on them. Since every other jurisdiction to which he might go operates likewise, there are no differential fiscal residuals.[20]

Even though this is a rather restrictive assumption, and obviously does not conform very closely to reality, the insight it affords is very important: Under the assumption that provincial budgets operate on a benefit principle, NFB's will be everywhere identical (i.e., equal to zero) so that equalization is not called for on grounds of economic efficiency. Therefore, if an equalization program were put in place in such a system, it would be inefficient and lead to reduced national output. This is so because it would of necessity generate positive NFB's in the "poorer" provinces and thereby reduce the incentive to take up more productive opportunities in the richer provinces.

Regional Disparities and Equalization

Let us continue with the assumption that provincial budgets operate under the benefit principle, and add a further one--namely that there are significant regional income disparities across the provinces. This does not change the above conclusion. There is no efficiency argument for equalization in the face of regional disparities per se. The fact that the benefit principle applies to government budgets is the critical factor in arriving at this conclusion. In a later section we shall dispense with the assumption of benefit taxation and thereby allow the possibility that regional disparities can lead to differing NFB's. If this is the case, then there will be an efficiency rationale for equalization. However, it arises not from the presence of regional disparities of and by themselves but rather because of the impact of these disparities on the NFB's across provinces.

Once again, mounting an equalization program under these circumstances would introduce a distortion in the system. Resource allocation would no longer be determined in accordance with market returns and national output would, as a result, be lower.

Pure Public Goods

A pure public good is one which all citizens consume equally and for which the total cost of production is not a function of population. My consumption of such a good does not affect yours, i.e., there is no congestion or crowding out problem associated with the public good. Hence, jurisdictions with larger populations will be able to provide pure public goods at a tax price that will be lower than jurisdictions with smaller populations. Moreover, migration from the low-population to the high-population area will exacerbate the problem--the tax price for providing the pure public good will fall further in the high-density area and will rise in the low-population area. Assuming that people's preferences for these pure public goods are everywhere identical, this will create a fiscal distortion--the NFB's will be higher in more populous provinces. Thus, the existence of pure provincial public goods does provide a rationale for equalization payments on efficiency grounds.[21]

At a practical level, this argument is not very important since it is difficult to conceive of many government services that would qualify as pure public goods. Legislatures may qualify to some extent. In this regard, it is interesting to note that in the original BNA Act special payments were in fact incorporated in the Act to cover the cost of legislatures--Section 118 provided for the support of provincial legislatures--$80,000 for Ontario, $70,000 for Quebec, $60,000 for Nova Scotia and $50,000 for New Brunswick. These sums can be construed as subsidizing legislatures since the amounts of funding were far more equal than were the respective provincial populations.

Of more practical importance are "quasi-public goods" defined as products where there is some aspect of jointness of consumption (i.e., some attributes of a pure public good) but where congestion costs eventually set in. Parks, schools, libraries, roads, etc., probably fall into this category. Up to a point, my consumption of these public goods and services does not impinge on your consumption. As Wilson, Percy and Norrie point out:

jointness of consumptions means falling average costs to the provision of these goods, which means that population size matters. Heavily populated areas will be able to provide such outputs at a lower cost to residents than will more sparsely populated areas. This means that some citizens are better off than their counterparts in other provinces...there will now be a fiscal incentive to move to the low cost jurisdictions, creating potential allocation problems.[22]

In short, under the assumption that preferences for these quasi-public goods are identical across the citizenry and that they are produced under conditions of falling average cost, there will be a case for equalization payments as a means of ameliorating differences in NFB's.

Regional Disparities and Redistributive Provincial Budgets

Consider the following two assumptions:

i) provincial budgets are "progressive" in terms of their distributional impact. For convenience, one can assume that expenditures benefit the population equally while taxes rise in accordance with incomes. Obviously, this assumes away benefit taxation;

ii) regional disparities exist in the sense that aggregate income per capita differs across provinces.

As Boadway and Flatters point out, two implications arise from these assumptions:

First, persons with above-average personal incomes in a province will suffer a net loss from this redistributive provincial activity because they contribute more in taxes than they receive in goods and services from the provincial governments. The opposite is true for persons with below-average incomes. Second, persons living in provinces with above-average per capita incomes will receive higher NFB's from provincial expenditures... .To see this, consider the simple case in which provincial expenditures are distributed among local residents on a uniform per capita basis, while taxes are proportional to individual incomes. Proportional taxes generate a greater per capita amount of tax revenues the higher the average income level. Since expenditures are assumed to be distributed on an equal-per-capita basis, this means that individuals at any given income level will receive greater NFB's on this account in a province with a high per capita personal income level. In general, the greater the overall progressivity of provincial fiscal structures, the greater the variation in NFB's between the rich and poor in any given province and the greater the average difference in per capita NFB's between high- and low-income provinces.[23]

Perhaps an example, drawn from a recent paper by Auld and Eden, will make this clearer.[24] Table 1 assumes that there are three persons in each of provinces A and B. For each province, the benefits of public good expenditures are distributed equally to each person and total government expenditure equals total tax revenue. Province A is "richer" in the sense that the average income is $15,000 whereas it is $10,000 in prov-ince B. With an assumed tax rate of 20 per cent, the per capita benefits in A are $3,000 and in B are $2,000. For the two categories of persons with identical incomes, NFB's are larger in province A (i.e., the individuals with incomes of $5,000 and $10,000).

Therefore, in the face of such NFB's, people will tend to migrate from the lower-average-income province to the higher-average-income province. This migration is fiscally induced or inefficient since it will move "well-allocated resources", to use John Graham's term, to the higher income province, i.e., to province A in the example. It has been argued that the solution in this case of regional income disparities and redistributive budgets "is an equalization program that would serve to eliminate all interprovincial differences in NFB's from provincial budgets.[25]

As long as all provincial governments maintain the <u>same</u> degree of progressivity on the tax and expenditure side and if the system of equalization payments is of the <u>net</u> variety (i.e., it takes the form of an interprovincial revenue-sharing pool), then a network of unconditional payments to provinces might indeed be the theoretically correct (first-best) solution. However, it is easy to see why this is unlikely to be the case. While such a system will provide the <u>potential</u> for eliminating the differential NFB's, what occurs in practice will obviously depend on the redistributive policies of the various governments. For example, by manipulating the column of per capita benefits in Table 1, the reader can generate NFB's, that for some income levels, flow in the <u>opposite</u> direction, even before any equalization takes place. It is true that one can mount a case that the nature of the federalism requires that we ignore the manner in which provinces redistribute income within their boundaries on grounds that that is their constitutional prerogative. However, this derives <u>not from efficiency per se</u> but rather from bringing into the analysis some element of the constitutional and/or nationhood arguments for equalization.

TABLE 1

PROVINCE A				PROVINCE B			
Income of Each Individual	Tax Rate 0.2 times Income	Per Capita Benefits of Public Goods	NFB	Income of Each Individual	Tax Rate 0.2 times Income	Per Capita Benefits of Public Goods	NFB
$ 5,000	$ 1,000	$ 3,000	+ $ 2,000	$ 5,000	$ 1,000	$ 2,000	$ 1,000
$10,000	$ 2,000	$ 3,000	+ $ 1,000	$10,000	$ 2,000	$ 2,000	0
$30,000	$ 6,000	$ 3,000	- $ 3,000	$15,000	$ 3,000	$ 2,000	- $ 1,000

Source: D.A.L. Auld and L.B. Eden, "Equalization and the Canadian Constitution", in Government and Policy, (forthcoming), Table 1.

Recapitulation

This, then, is the essence of the case on efficiency grounds for the existence of an equalization program in the absence of rents. It is appropriate to note, given the historical emphasis in this study, that an understanding of these issues in the Canadian context can be traced back to the early 1960s in the writings of Dalhousie's John Graham. For example, with respect to the issue that regional disparities, *per se*, do not provide an argument for equalization if budgets are distributionally neutral or if benefit taxation prevails, Graham notes:

> If public services were divisible and were provided on a benefit basis or according to the income levels of individuals [i.e., distributionally neutral budgets] the problem would not arise; similarly situated individuals in different provinces could be equally treated with respect to benefits and burdens without any equalization transfers, even if average incomes or income distributions differed. In this case it would be meaningless to talk about differences in fiscal capacity.[26]

Matters are very different when provincial budgets are not distributionally neutral (note that Graham's term "fiscal residuum" is essentially equivalent to our own use of NFB's):

> When there is an egalitarian redistributive element in the fiscal system, so that the 'fiscal residuum' (defined as benefits from public services minus burdens of taxation) decreases with income, differential fiscal treatment of similarly situated individuals in low- and high-income provinces will occur, because of the necessity of imposing higher tax rates in the lower income provinces to provide any given level of services. The concepts of fiscal capacity and differences in it then become meaningful.[27]

The solution requires a system of equalizing transfers to offset these differing NFB's, or else optimal resource allocation will not occur (this quotation takes on more force when one realizes that Graham is also assuming that resource rents influence NFB's):

> Without transfers, differential fiscal treatment will exert pressure indiscriminately on factors to move from a poor province or locality, even factors that are well located there, and will inhibit the inward movement of factors from richer provinces and localities, even ones that would be better located in the poor province or locality... .[Such an equalization scheme] would be geographically neutral in that the inducement of higher rewards elsewhere would still operate with respect to poorly located factors at the same time that differential fiscal pressure was eliminated with respect to well-located factors.[28]

Thus, it is clear that Graham is not arguing for an equalization program to stem factor mobility, but rather to counteract only that aspect of mobility that is "fiscally-induced" or "rent-seeking" (i.e., that portion motivated by differential fiscal pressure, as he refers to it). This is evident in his discussion of equalization and the Atlantic Provinces:

> The Atlantic provinces provide a useful illustration. Differences in marginal productivity probably call for continued net emigration of some labour and capital. But the withholding of federal transfers from the Atlantic Provinces in order to accelerate the movement of labour and capital from that region would not be economically sound, for it would encourage not only the desirable movements of factors whose productivity is relatively low there, but also the undesirable movement of factors whose productivity compares favourably with what it would be in other parts of the country. It would also discourage the desirable inward movement from other parts of the country of factors whose productivity would be greater in the Atlantic Provinces.[29]

In summary, then, the following observations relating to efficiency and equalization appear appropriate:

- In a federal system, the possibility exists that net fiscal benefits will vary across jurisdictions.
- Differential NFB's, to the extent that they are <u>not capitalized</u>, will impede optimal resource allocation since factors of production will take account of NFB's as well as market returns in selecting their province of location.
- Efficiency requires that these NFB's be eliminated.
- An equalization program is not normally the first-best approach to remedying the efficiency problem, but when coupled with practical and constitutional constraints, it does acquire a "second-best" rationale.
- The mere existence of an equalization program does not imply that efficiency is enhanced. Under benefit taxation or distributionally neutral provincial budgets, the presence of equalization would be efficiency retarding. If budgets are redistributive and if average income levels vary across provinces, differential NFB's are likely to arise. Whether a given equalization program is too generous or too limited under these circumstances would depend on the program itself as well as the variance of the NFB's, i.e., it is an empirical question.

- Under the nationhood and constitutional rationales, the appropriate equalization program focuses on levels of basic services and unduly high tax rates. Under the efficiency rationale, the focus is different--eliminating NFB's or equalizing fiscal capacity, with no specific reference to basic services or levels of taxation.[30]
- The efficiency criteria would argue for a net equalization scheme (i.e., rich provinces paying in and poor provinces drawing from the equalization pool).[31] Only in this way could NFB's be eliminated, short of using the traditional Canadian scheme and equalizing to the province with the highest NFB's. As a final comment, note that a net scheme achieves the efficiency criterion at a smaller overall scale of government than is the case for a gross scheme.

IV

RESOURCE RENTS, EFFICIENCY AND EQUALIZATION

Resource Rents and NFB's

The above arguments relating to the efficiency rationale for equalization apply to the case of resource rents as well. However, it is important to single out resource rents for special treatment for several reasons. First of all, they have dominated the recent discussions relating to the design and adequacy of equalization payments. This was clear in Part II above, where concern over these resource rents led to several modifications in the equalization formula. Second, they are very large and geographically concentrated. Hence, they will have a substantial impact on NFB's across provinces.

In terms of focusing on the interaction among resource rents, NFB's, and equalization, it seems appropriate to adopt a conceptual framework that differs slightly from that which was utilized above.[32] Let the comprehensive income of a representative individual in a province be defined as follows:

comprehensive income = factor income after provincial taxes + per capita benefits from provincial government activities.

Focus is directed only at provincial budget activities under the assumption that taxpayers in similar economic situations are treated similarly by the federal government. If one assumes that benefits from provincial activities stem from expenditures financed from taxes on individuals and from taxes on resource rents, the previous expression can be written:

comprehensive income = after tax factor income + per capita benefits from taxes on individuals + per capita benefits from resource rents collected by the provinces.

Suppose we make the further assumption that one can dichotomize provincial budgetary policy in the following manner: from the proceeds of taxes on individuals the government provides services that are in exact proportion to the taxes paid and from the taxes on resources the benefits are provided on an equal-per-capita basis. This means that in terms of, say, personal income taxes, the provincial budget is distributionally neutral. Overall, it cannot be, however, since the expression for real income now becomes:

comprehensive income = factor income before provincial taxes + per capita resource revenues.

The first term now is in terms of before-tax provincial income on the above assumption that residents get back in public services an amount equal to their taxes paid. In the absence of resource rents, we have seen from the previous section that this did not lead to differing NFB's and did not provide a rationale for an equalization program. In the presence of resource rents this is no longer the case as the above expression makes very clear. Differential per capita values of resource rents across provinces will generate differential NFB's, irrespective of the assumptions relating to the distributive nature of provincial budgets. Moreover, since the resource rents accruing to governments vary dramatically across provinces, this may encourage reallocation of labour across provinces to take advantage of high NFB's in the resource-rich provinces.

It is important to note that the concept of rents which contributes to differing NFB's incorporates all economic rents and not just the royalty revenues of the western energy-producing provinces. The existence of "implicit" rents from the operations of Quebec and Ontario hydro facilities, which do not show up as provincial revenues but rather are transferred back to their residents in terms of lower prices for electricity would also qualify as benefits that alter NFB's across provinces.

This potential for rent-seeking or fiscal-induced migration has, not surprisingly, been recognized in many quarters. Douglas Clark of the Federal Department of Finance made the following observation:

> In the final analysis the adjustment of people to resources...is likely to take place in one of two basic ways: one, by a redistribution of rents among provinces, and the other by a redistribution of people among provinces. To the extent that the adjustment takes place through a reallocation of rents, pressures bringing about a redistribution of people will be diminished. To the extent that the adjustment does not take place through rents, the population pressures will increase.[33]

More recently, Thomas Courchene and James Melvin focused on much the same issue in the context of an analysis of the regional implications of Alberta's Heritage Fund:

> ...it seems probable that the existence of the Fund will, ironically enough, drive the marginal productivity of labour in Alberta down relative to that in Ontario. On the margin the prospective migrant will equate the marginal product of labour in Ontario with the marginal product of labour in Alberta <u>plus</u> the migrant's share of the non-capitalized portion of the Fund. In some sense the (Heritage Fund) is a 'common property resource' waiting to be privatized in future years and it will encourage greater migration than if it were already privatized, in much the same way as the common property nature of the fishing industry encourages too many fishermen.[34]

Thus, from a theoretical perspective, there is a case to be made for addressing the efficiency problems arising from resource-rent-related NFB's. Two questions arise from this. First, as a practical or empirical matter, is this an issue that warrants redress? Second, supposing that it is, is an equalization program likely to be an appropriate solution? A later section will focus on the first question. We now turn to a discussion of the second.

Alternative Ways of Handling Resource-Related NFB's

Privatization of Rents[35]

Suppose in 1973 (or at the time of the Leduc find) the Government of Alberta distributed ownership rights on a <u>once-and-for-all</u> basis to the residents of the province, i.e., it "privatized" the rents. All energy rents would accrue to these original owners as they were realized, and no new shares would be issued. In other words, these original owners would have a claim on the present and future stream of energy rents. What are the implications of such a scheme for NFB's and for equalization payments? First of all, these energy rents or royalties would no longer be a direct source of generating positive NFB's. There would be no incentive for

Canadians to move to Alberta to obtain a share of the energy resources--they would have already been disbursed. Secondly, Albertans would not be "locked in" to their province. They could migrate and carry their ownership titles with them. Presumably, these shares would be marketable and could be traded like any other share so that Canadians could buy a claim to these rents without moving to Alberta. Thus, resource rents per se would no longer be a determinent of migration.

In other words, if the rents are privatized then rent-seeking migration is effectively eliminated. However, since proportionally more people with claims on these rents would probably still reside in Alberta and since the returns on these shares would be taxable it is likely that Alberta's income tax revenues would increase beyond what otherwise would be the case, i.e., Alberta's royalty revenues would drop sharply as a result of privatization but personal income tax revenues would rise as a partial offset. This would mean that positive NFB's would likely arise from this source provided that Alberta's budgets were not operating under a benefit principle. (This situation was dealt with above under the heading "Regional Disparities and Distributive Provincial Budgets"). Under the pre-existing equalization program, these revenue increases would be eligible for equalization. As a result there would ensue a rough-and-ready source of "geographical" equity as far as the funding of the scheme was concerned because Ottawa's income tax revenues arising from Alberta would also be rising apace.

It is important to distinguish between this once-and-for-all allocation of property rights and other sorts of allocation schemes. Suppose, for example, that energy royalties collected by the energy provinces were distributed annually to all residents of the province as of December 31 of each year. Under such a system of allocation, rent-seeking migration would still persist. Moreover, existing residents would have to remain in the province if they wished to continue to receive the windfalls. This distinction between a once-and-for-all allocation of these property rights and an on-going allocation is also addressed in a recent article by John Dales.[36]

Hence, energy rents, per se, pose a problem for fiscal efficiency only to the extent that they are not fully privatized, i.e., only to the extent that the property rights to the stream of rents remain in the hands of the provincial governments, or what is the same thing, remain unallocated (and, uncapitalized). This being said, however, it is very important to

recognize again that these non-appropriated rents include more than just the high-profile energy royalties that are collected by the resource provinces. Citizens of the various provinces also collect rents from the various hydro facilities. These rents do not generally end up in the coffers of their respective governments. Rather, they are distributed in the form of such things as lower-cost electricity. Nonetheless, they too lead to positive NFB's for provincial residents. And, as will be seen later in the manuscript, the annual values of these hydro rents run into billions of dollars.

Redefining Income for Tax Purposes

Since the efficiency problem arises because of the divergence between market income and comprehensive income, one possible solution is to alter the definition of income for taxation purposes to incorporate these NFB's, whether they arise from provincial royalty collections or from below-market prices for services such as electricity. Hence, residents of resource-rent provinces would include in their income for tax purposes the imputed value of their NFB's. Looking at the issue in this manner is highly instructive, since it provides a rationale for the existence of heritage funds. This is so because: (a) individuals in the province are not required to include any such royalty revenue as part of their income; (b) the province itself, despite the fact that it is receiving factor incomes (i.e., rents or profits or interest), is exempted from paying federal tax on these services by virtue of section 125 of the Constitution.[37] Thus, by collecting royalties and then by disbursing these monies (either immediately or over time using a heritage fund as a buffer) in terms of lower provincial tax rates or greater provincial services the province can in effect transfer these funds tax-free to its residents. Any sort of privatization scheme would subject these monies to federal taxation. This is an interesting vicious circle, as it were. The incentives in the system are such that they encourage provinces to refrain from allocating property rights to these rents. But the fact that they, therefore, accrue to the provinces in terms of a 'common-property' resource means that they induce rent-seeking migration to the extent that they are not capitalized.

Equalization

It was this very concern over section 125 that was addressed nearly a decade ago by University of Ablerta professors Walter Gainer and Tom Powrie.[38] They argued that the rents, profits, and interest accruing to provincial governments are in effect factor incomes and, as such, ought to be treated for tax purposes in much the same manner as would be the case if they had arisen in the private sector. Their specific proposal was that 30 per cent of energy royalties ought to be transferred from provincial to federal coffers (30 per cent being roughly equivalent to what the federal tax payable would have been if these royalties accrued to private sector individuals). This money would then be utilized to equalize the remaining provincial revenues in accordance with the then-existent equalization formula.

More generally, an equalization program can be a first-best solution to the efficiency problem. Recall that the assumptions underlying this section were that taxes paid by residents were in proportion to public services received and that revenues received from royalties were converted into equal-per-capita benefits. Under these special circumstances, a system of payments to provinces that equalizes these NFB's will be identical to a series of transfers to individuals.

Note, however, that the type of equalization program required here is an interprovincial rent-sharing pool - i.e., transferring funds from the coffers of the high NFB provinces to the low NFB provinces. Equalizing these NFB's via the RTS system would not solve the problem since the sources of the federal government's revenues across provinces are not distributed in the same proportions as the discrepancies in NFB's. In other words, the "funding inequity" discussed in Part II above would again come into play. Boadway, Flatters, and LeBlanc recognize this:

> Under a gross scheme (i.e., rich provinces do not pay into the funding of equalization) the federal government pays for equalization out of its general revenues...Since a large proportion of its general revenues comes from personal income taxes, this means that the burden of an increase in equalization payments due to an increase in resource revenues falls disproportionately on provinces with high personal incomes. A net scheme (where rich provinces pay in) would avoid this problem: the increase in equalization would be funded by the same increase in revenues that caused it.[39]

In other words, there is no efficiency case, in the true sense of the term, for any of the recent formulation of Canada's equalization program.

Summary

To conclude the analysis of the relation between economic efficiency and equalization, it is essential to keep in mind one important principle. The efficiency argument for equalization does not arise because the provinces are, in one way or another, deserving of equalization payments. It arises because without equalization, individuals would be subject to fiscal pressure that could lead to migration decisions that are not consistent with an optimum allocation of resources. This is in marked contrast with the "constitutional" or "federalist" argument for equalization outlined in the first part of this chapter where the rationale for equalization payments was in terms of political units (so as to provide the provinces with the financial ability to deliver their constitutional responsibilities) rather than in terms of individuals. This dichotomy of rationales may be disconcerting to the economist and political scientist alike. But it does emphasize the reality that for many public policy issues no one discipline can assert exclusive proprietary right over the policy in the first place or over its appropriate design in the second.

Later in the chapter, we shall return to some of the practical and empirical realities that will presumably influence the degree to which one would want to design an equalization program solely on the basis of efficiency. For now, however, attention is directed toward the equity argument for equalization.

V

EQUITY AND EQUALIZATION

Broad horizontal equity

The equity case for equalization is usually based on the public finance concept of horizontal equity, i.e., like treatment of similarly-situated individuals. In particular, if two persons have the same degree of well-being before a change, they should have it afterwards as well. The 'change' that is of interest here relates to the impacts on individuals of governments in a federal state. The measuring rod that we shall adopt for assessing an individual's well-being is 'comprehensive income', which of course would include market income as well as NFB's.[40] However, this is still not sufficient in order to address the horizontal equity issue: it is necessary to stipulate an initial position against which comparisons can be made. Boadway and Flatters suggest two alternative initial positions, referred to as broad horizontal equity and narrow horizontal equity.

> The first, what we shall call broad-based horizontal equity, is that persons with the same real comprehensive income ought to be treated identically by all governments taken together, both federal and provincial. Since provincial governments violate this norm, the federal government must take steps to redress the differences in treatment. That will be the task of equalization payments. The second, or narrow-based horizontal equity, is that the federal government need only concern itself with the equity of its own actions when deciding upon a policy. The real income levels achieved, after the policies of the provincial government actions, have been taken (including the NFB's) as a starting point. The federal government then only ensures that its own actions are equitable. It turns out that there is still some role, if only a restricted one, for equalization payments under narrow-based equity. The role arises out of the fact that the existing federal tax system does not capture all elements of real income - in particular it misses NFB's of provincial government activities.[41]

Boadway and Flatters suggest that one way to view this distinction is in terms of the property rights or endowments of individual citizens:

If different provinces provide identical citizens with different net real income benefits as a result of provincial activity, and if one wished to award full property rights to individuals over such benefits,... (based, say, on an interpretation of the constitution), then the federal government should take the post-provincial government position as the starting point for horizontal equity. If, however, one does not wish to assign such property rights on the basis of (province of) residency, the initial position should be that which would prevail in the absence of all government fiscal activity, including that of the province. It turns out that both views call for some sort of equalization on equity grounds, but for widely differing types and amounts.[42]

The purpose of the present section is to focus on the implications for equalization arising out of the broad horizontal equity concept. The following section will deal with narrow horizontal equity. Completing the analysis of equity and equalization will be discussion of whether any notion of horizontal equity has much meaning in a federal state.

1. Labour is immobile

If labour is immobile (or migration costs are infinite), then broad-based horizontal equity requires that the net impact on individuals of all governments should leave previously similarly-situated individuals similar in the post-government situtation. This implies that NFB's must be equalized across provinces. Thus, broad-based horizontal equity, while labour is immobile, generates the same requirements for equalization as those derived in the previous section relating to efficiency. Interestingly enough, however, in this particular case where labour is immobile there is no efficiency case for equalization since there can by definition be no fiscally induced migration.

It does not follow that a system of equalization payments is the 'first-best' solution to achieving horizontal equity in the case where labour is immobile. Indeed, all the caveats on this score that were raised with respect to the efficiency case also apply here, even though as noted above there is no efficiency problem arising from differing NFB's when migration costs are infinite.

2. Labour is perfectly mobile

Under the opposite assumption, namely that migration costs are negligible, what is the appropriate notion of equity in a federal system? In our opinion, it is the ability of provinces to tailor their policies to the per-

ceived need of citizens on the one hand and the right and ability of citizens to choose their locality on the basis of these differing bundles of services on the other. Consider the following passage from Norrie, Percy, and Wilson:

> [Suppose that]...An Alberta resident with a market income of $10,000 receives a net increase in fiscal benefits of $1,000 while his identical (with respect to market income potential) counterpart in Ontario does not. Assume first that labour mobility is perfectly responsive to real income differentials among regions. Ontario residents, seeing the new fiscal benefits in Alberta, will begin to move there, depressing wages in the recipient region and raising them in the sending one. By assumption, this flow will continue until the gain to the last migrant is exactly offset by the loss from lower private earnings. In this case there can be no horizontal inequities. The representative individual is exactly as well off in either province, after the adjustment in factor earnings has taken place.[43]

Thus, there is no horizontal equity case for equalization when labour is perfectly mobile. However, there is an efficiency case - indeed, a heightened one since with perfect mobility individuals will migrate in response to even the slightest variations in NFB's.

Hence, it is tempting to argue that as the degree of mobility increases (i.e., as migration costs fall) the efficiency case for equalization is strengthened while the broad horizontal equity case decreases. And vice versa. We submit that this is not correct. As far as equity alone is concerned, the case for transfers that subsidize mobility appears every bit as strong as the case for equalization transfers.

This does not mean that one cannot call for equalization payments in terms of some 'overall' notion of equity. After all, that is what the 'nationhood' rationale was all about. But in terms of what we perceive to be the notion of equity within the traditional economic approach to federalism, the case for mounting an equalization program on equity grounds appears to be wanting.

Narrow-based horizontal equity

In order to facilitate the analysis of narrow-based horizontal equity, it is convenient to recall the formulation of comprehensive income introduced in connection with the interaction among resource rents, efficiency and equalization, namely that comprehensive income equals factor income before taxes plus per capita resource revenues. To make this more general, let us express it as follows:

comprehensive income = factor income before taxes plus per capita source-based taxes,

where source-based taxes are those levied at the source of income generation. Included in source-based taxes would be corporate taxes, excise taxes on purchases of firms, natural resources taxes, and property taxes on businesses. The personal income tax, retail sales tax, excise taxes on consumption, payroll taxes and residential property taxes are classified as residence-based taxes, that is taxes levied on the individual's income or use of income in the province of residence.[44] Recall also that the assumptions underlying this analysis were: (a) that individuals get back in provincial services an amount equal to the residence-based taxes paid, i.e, the provincial budgets are distributionally neutral with respect to these residence-based taxes, and (b) that the benefits from source-based taxes are distributed on an equal-per-capita basis.

Despite the fact that narrow-based horizontal equity accepts the post-provincial position as the starting point for implementing horizontal equity, there is still a role for an equalization of some alternative redistribution scheme. This is so because individuals with the same comprehensive income after the impact of provincial budgets are not treated equally by the federal taxation system. The problem arises because factor payments before taxes are part of taxable income at the federal level whereas per capita source-based taxes (or rather the benefits therefrom) are not. In other words, the NFB's arising from, say, resources revenues are not treated as taxable income. The obvious theoretical solution would be to alter the definition of income for federal taxation purposes to incorporate these NFB's. Another approach would be to initiate a program of equalization across provinces that would offset this horizontal inequity.

It is here that efficiency and equity point in different directions. As noted above, the efficiency approach would be to equalize any and all NFB's. Under narrow-based horizontal equity, what requires equalization is only a portion of these NFB's, namely those that arise from source-based taxes. Moreover, only a part of these NFB's would be subject to equalization, i.e., that portion which equals the average federal marginal tax rate in the province. This would have the impact of subjecting these NFB's to federal taxation which, as noted above, is the source of the lack of narrow-based horizontal equity.

We now alter the above example to assume that provincial budgets are

redistributive. In particular, suppose that the benefits of residence-based taxes are distributed in a progressive manner so that persons with low incomes in the province will now have positive NFB's and vice versa. The distribution of the benefits of source-based taxes remains the same, i.e., equal per capita. Does this change the nature of the desired equalization program under narrow-based horizontal equity? The answer is no. This is so because these NFB's arise solely from the province's own distribution decisions - overall the NFB's from residence-based taxes will sum to zero. And narrow horizontal equity takes the post-provincial position as the starting point for applying federal standards of equity. In other words, the federal budget need not be concerned with offsetting the nationwide horizontal inequities that are introduced by provincial government budgets.

Horizontal equity and the economic theory of federalism

If we accept that the essence of the economic approach to federalism is that it enhances economic welfare by allowing provinces to tailor their range of goods and services in accordance with citizen preferences, then it is not surprising that the notion of broad-based horizontal equity geared to the elimination of all NFB's might run into some conceptual trouble. After all, it effectively overrules the provinces' right to cater to the needs of their citizens. Moreover, if the attempt to establish horizontal equity is via an equalization program (rather than a first-best scheme), horizontal equity will in the end not be achieved unless the provinces operate on the benefit principal or have identical degrees of progression in their budgets. As A.D. Scott noted nearly two decades ago, 'if...horizontal equity is not in fact to be achieved, is there any point in making the grants?'[45]

This point has recently been made in a slightly different manner by Wilson, Percy and Norrie. Noting that the essence of federalism is that provinces can choose the degree of vertical equity (i.e., different treatment of differently situated citizens) that they deem appropriate, correcting for horizontal equity by means of equalization may create as many problems as it solves:

> Take the case of two relatively wealthy individuals with the same before-tax income, one in St. John's and one in Edmonton. Suppose that the real cost of providing government services in Newfoundland is much higher so that, in the absence of any intergovernmental transfers, the St. John's resident is only as well off after taxes as a second resident of Edmonton with less gross income than either of the other two. Broad-based horizon-

tal equity demands that we transfer revenue to the government of Newfoundland to put the two wealthy individuals back on an even footing, all the while being content with the welfare gap between the two Edmontonians. This can be even more dramatic since in practice this usually means we tax the poorer (as well as the wealthier) Edmontonian to subsidize the consumption of public sector output by the wealthy Newfoundlander.

It seems more than a little strange, in fact, that we in Canada devote so much effort and resources toward achieving horizontal equity across provinces, yet tolerate much greater inequalities among individuals within each province. It might be argued...that it would be impolitic to interfere with the income distribution within the recipient jurisdiction. But it could be argued in response to this that Ottawa's equalization obligations cease at that point where the degree of horizontal equity across provinces approximates that degree of vertical equity within the have-not areas. If the political leaders in these provinces are content with their own internal income distribution, then surely they cannot insist on a more equitable standard horizontally.[46]

Boadway and Flatters' introduction of the concept of narrow-based horizontal equity was no doubt designed to take account of some of these issues and more particularly to reconcile horizontal equity with the realities of federalism. Innovative and valuable as this contribution may be, it is nonetheless the case that the type of equalization program that is consistent with narrow-based horizontal equity is rather far removed from either the past or present equalization formulas: indeed, in the absence of resource-based taxes it does not call for any system of equalization payments. What normally passes for equity can, in our opinion, better be incorporated under the efficiency criterion on the one hand and the nationhood and federal arguments on the other. We submit that an equally valid approach to equity in the context of an economic approach to federalism is to provide mobility subsidies so that 'voting by foot' is a reality for all citizens. However, we also recognize that many of our colleagues will disagree with this view. Nonetheless, the remainder of the chapter, which deals with several theoretical and practical issues relating to the establishment of an equalization program, will focus primarily on the efficiency case for equalization.

VI
FROM THEORY TO PRACTICE

In the analysis relating to the efficiency arguments for a system of equalization payments we have been using the terms NFB's, energy rents, and source-based taxes interchangeably. Strictly speaking, the efficiency case depends on isolating and equalizing NFB's. Under certain conditions, increases in energy royalties will generate equivalent increases in NFB's. In others they will not. One of the purposes of this chapter is to isolate these conditions. More generally, our purpose is to emphasize that considerable caution is needed in converting theory to practice.

Capitalization, crowding out and heritage funds

Critical to the theoretical analysis underlying the efficiency case for equalization was the assumption (sometimes implicit) that NFB's were not capitalized. For example, it may well be that there exist substantial benefits from locating industry in Ontario because of subsidized electricity. But if these benefits are reflected in site values then there may be no net gains from moving there. Similarly with energy royalties. If these benefits are reflected fully in the price of land or existing structures, then, in effect, the potential migrant has to 'buy' his share of the rents. Full capitalization of these benefits would mean that, on average, the NFB's are wiped out. To be sure, intramarginal rents will always exist for certain categories of migrants. In principle, however, full capitalization of rents is essentially identical to a once-and-for-all privatization of these rents; i.e., no net fiscal benefits would be generated.

With land in such abundance in the West, it is hard to imagine a scenario of full capitalization over the longer term. Even if this is true, the likelihood is that over shorter periods of time usable land and structures will be in relatively fixed supply so that migration will generate

congestion or crowding which in turn will drive up property values. And if usable land is in ample supply, it is clearly in the interests of the owners to lobby the authorities to impose zoning restrictions and the like, thereby imposing entry barriers and in effect capitalizing the rents. Thus, even though there exists the potential for citizens to migrate in pursuit of rents or fiscal benefits this avenue is not effectively open if there exists an 'entry barrier' which offsets the prospective gains.

One can take this further. Most analysts argue that the portion of energy revenues placed in heritage funds should be excluded from any NFB calculations. They represent future NFB's and will be taken into account where they are actually drawn upon either to provide additional public service or to reduce provincial taxes. However, if potential migrants view these funds as a source of future benefits, the resulting influx may result in levels of capitalization <u>in excess</u> of the calculated NFB's.

In theory, then, it is only the <u>uncapitalized</u> portion of NFB's that ought to be eligible for equalization. Moreover, it seems to us that the burden of proof with respect to this issue should lie on the side of proving that there is not full capitalization rather than where it now appears to rest, namely on demonstrating that these rent-generated NFB's may be capitalized. One notable exception is U.S. economist Wallace Oates:

> ...existing fiscal differentials (e.g., varying levels of taxable capacity) across jurisdictions will tend, to some extent at least, to be capitalized into property values so that those who choose to live in fiscally disadvantaged areas are compensated by having to pay lower land rents; from this perspective, horizontal equity under a federal system is, to some degree, self-policing. The need for equalizing grants in a federation is thus questionable. Perhaps it is best to regard their role as a matter of 'taste'.[47]

It may well be that this attitude explains the absence of a formal equalization program in the United States, although it also is the case that the NFB's across the various states are much less than those in Canada (largely because of the presence of provincial resource rents).

In any event, more attention has to be paid to the likelihood that some portion of the NFB's will likely be capitalized.

Terms of trade and factor-price equalization

Soaring energy royalties do not simply arise out of thin air. They are generated because the world and domestic energy prices have risen. In

economic terms, this means that there has been a shift in the terms of trade in favour of the energy producing regions of the country. The regional implications of this term of trade change have been analyzed by Courchene and Melvin in a recent paper.[48] They point out that the principal impact of the terms-of-trade change can, at the macro level, be thought of as a transfer of purchasing power from the east (non-energy provinces) to the west (the energy provinces). In their words:

In the short run this will be accomplished principally through financial transfers - residents of the east or their governments will be drawing down savings or else increasing borrowing either from the west or outside the country. Over the longer term the transfer will tend to be effected in real terms - easterners will pay for their (probably decreased) oil imports through an increase in exports either to the west or to the rest of the world. Essentially, therefore, domestic absorption by easterners must decline by the amount of the transfer and vice versa. This is the macro adjustment problem associated with the terms-of-trade effect.[49]

Occurring simultaneously is what might be referred to as a micro adjustment. The increase in the terms of trade increases marginal productivities of both labour and capital in the energy sector:

...real wages will tend naturally to rise in the west relative to the east. A fall in the relative wage in the east would at the same time (a) enhance exports to and capital investment from the west and (b) increase output in the east, both of which would help effect the real transfer. Combined with this will be a movement of labour from the east to the west in response to the real wage differential which will further facilitate the real transfer.[50]

Now, all of this would take place even if there were no increase in provincial royalty revenues. The existence of substantial energy rents accruing to the governments in the west (neglecting some of the offsetting factors discussed later) may produce an additional incentive for migration since these revenues will generate an increase in NFB's. Thus, of and by itself, an increase in labour flows to the west is not evidence of inefficient migration.

Indeed, if markets were working effectively, the presence of higher NFB's would imply that the increase in the real wage in the west would not rise as much as would be the case in the absence of these government royalties. It seems to us, therefore, that one ought to get concerned about inefficient migration only when wages in the west fall (from their original relationship) relative to wages in the east. This would imply that migration is being driven by a concern over comprehensive income (market

income plus NFB's) and the NFB component is dominant. But casual empiricism suggests that market wages in the west have not fallen relative to those in the east.

In any event, the point of all this was to emphasize that the correlation between rising resource rents in, and increased migration to the west does not imply that this increased mobility is inefficient.

Gross vs. net rents

There is another reason why focusing on energy rents or source-based taxes may be misleading - they may not convert on a one-to-one basis into NFB's. This is so because they ignore the range of provincial expenditures that may be required to generate these revenues, e.g., the infrastructure (roads, telephones, schools, civil servants) that must be put in place, the land settlement claims for native peoples in the case of Quebec hydro. It is evident, therefore, that it is net rather than gross royalties on rents that generate NFB's and that ought to be the object of equalization.

In principle, of course, this should apply to all revenue categories. However, for many revenue sources the provincial expenditures required to collect these revenues do not vary much across provinces in per capita terms or in expenditures per dollar of revenue collected. But this is clearly not the case for resource-based revenues.

Foregone rents

On efficiency grounds the type of equalization formula called for is a net scheme, i.e., an interprovincial revenue sharing pool where the poor provinces draw from the pool and the rich provinces contribute. As Professors Helliwell and Scott note in assessing the contributions into the pool, '(any such) system must give credit to Alberta for the sharing already underway in the form of sales of oil and gas to other Canadians at less than world aid prices.'[51] As the domestic price becomes more in line with world prices this transfer disappears. However, the foregone rents to Alberta have numbered in the tens of billions of dollars.

Interestingly enough, this transfer of foregone revenue to other Canadians is more consistent with the efficiency arguments outlined earlier than is the present equalization program. The transfer by-passes pro-

vincial governments and goes directly to consuming Canadians. Moreover, it is in fact a net scheme in the sense that it represents a direct transfer from high NFB provinces to low NFB provinces. Finally, unlike the present equalization scheme, Ontarians are not excluded from the process. The problem, of course, is that it generates its own efficiency concerns because the domestic price of energy is held beneath world prices.

Confiscatory taxation

A fifth concern relating to the efficiency criteria is that the complete equalization of NFB's (via an interprovincial rent-sharing pool) would levy a near 100 per cent tax on the resource provinces. In turn, this would severely curtail the incentive for these provinces to develop their own resources. Indeed, the tax could be greater than 100 per cent if one did not allow the deduction of those provincial expenditures required to generate the resource revenues, i.e., if royalties entered the formula in gross rather than a net basis. Hence, most advocates of equalizing energy rents would settle for a partial equalization of these rents in order to preserve the provincial incentive to develop their resource bases.

Recapitulation

Thus, while the case for an equalization program on efficiency grounds can be compelling within the context of abstract theory, there are a number of very significant qualifications that have to be examined in order that this theoretical argument hold water at the practical level. What we hope to have accomplished in this section is to isolate some factors that merit further research in order to ascertain the degree to which the existence of, say, provincially collected energy rents will require the corrective action of an equalization program on efficiency grounds.

To this point the analysis of the efficiency case for equalization has ignored the critical empirical issues. Do NFB's affect the migration decision? If internal migration does not respond to provincial fiscal structures and NFB's then there is no fiscal induced migration. Relatedly, do equalization payments retard the migration process? If not, then they can hardly be viewed as a solution to a fiscal-induced migration. The last substantive section of this chapter is devoted to surveying the literature relating to the influence of fiscal variables on the migration decision.

VII
FISCAL STRUCTURE AND INTERNAL MIGRATION: THE EMPIRICAL EVIDENCE

More than a decade ago, Courchene addressed the issue of whether or not fiscal variables influenced the migration decision.[52] His conclusion, based on a set of regression equations, was that both equalization payments and unemployment insurance transfers did serve to inhibit out-migration. It is important to recall that this work was completed prior to the surge in provincial energy royalties and prior to the reworking of the unemployment insurance legislation in 1971 which not only increased the U.I. benefits but also incorporated longer benefit duration for the poorer regions of the country. This was part of the evidence that led Courchene to argue that far from contributing to the elimination of regional disparities both the level of, and incentives embodied in, the overall transfer system were contributing to rigidifying and perhaps even exacerbating regional disparities.[53] More recently this has come to be known as the 'transfer-dependency thesis.' Essentially, it argues that the transfer system is jamming up the regional adjustment process and enticing factors of production (particularly labour) to remain where they are rather than seeking out employment in other regions of the country where their marginal productivities are higher.

With the advent of substantial energy rents accruing to the resource provinces the case for an equalization program in order to enhance efficiency gained popularity among academics: equalization would serve to curtail that portion of the out-migration to the resource-rich provinces which was motivated by fiscal rather than market factors. Thus, it is also important for this hypothesis that equalization be shown empirically to inhibit migration. We shall have something more to say about these two competing hypotheses in the concluding section. For present purposes, we want only to point out that, contrary to what others may believe or have written, Courchene has never argued that equalization payments be re-

duced, let alone eliminated. To be fair to the critics, however, we should add that he was and is still concerned that they be made too generous.

In any event, it is hardly surprising in the light of the efficiency arguments for equalization that substantial further interest was generated in the empirical relationship between fiscal structure and migration. By far the most ambitious effort in this direction is the Economic Council of Canada study by Stanley Winer and Denis Gauthier.[54] In summarizing these results in its special report, Financing Confederation, the Economic Council of Canada makes the following points with respect to the relationship between equalization payments and migration: "Unconditional grants (including equalization) have significantly slowed the out-migration of low-income groups from the rest of Canada to Alberta and British Columbia.[55]

More interesting were the results of the simulation exercise that attempted to forecast what migration rates over 1971 to 1977 would have been if (a) equalization payments were frozen at their 1971 levels; (b) Western natural resources revenues had remained at their 1971 levels; and (c) the post-1971 regional variation in U.I. benefits had not been put in place. For out-migration from the Atlantic provinces, the simulation indicates:

> ...migration rates from the Atlantic provinces to Saskatchewan and Alberta for the low-income group were between 40 and 65 per cent higher than they would have been had western natural resource revenues remained at their 1971 level. The corresponding increase for the middle- and high-income groups varied from 20 to 30 per cent.
>
> With respect to the role of equalization, the results are more complex. The effect of equalization on rates of migration is ambiguous. (However), the 'best' results (i.e., those in accordance with theoretical prediction)...show that equalization payments would have retarded the migration of low-income persons to all destinations except Manitoba (which also receives substantial equalization payments)...
>
> (With respect to the modification in U.I.) the simulation suggests that, on balance, changes to the unemployment insurance system retarded out-migration from the Atlantic region to other provinces...For example, the rate of out-migration to Ontario of low-income persons was between 35 and 42 per cent lower in 1977 than it would have been in the absence of any changes to the unemployment insurance system.[56]

In terms of the impact of these three variables on migration into Alberta and British Columbia the Economic Council of Canada concluded:

> ...fiscal benefits financed by natural resource revenues have attracted [migrants] in all income groups. For example, the rate of migration to Alberta by those in the low-income group is increased by about 13 per cent

as a result of the increase in natural resource revenues in the West. The corresponding rate of increase for the middle- and high-income groups is about 10 per cent.

...the increase in equalization payments, which to a large extent was the result of a rise in western natural resource revenues, produces a reduction in migration rates to Alberta and British Columbia between 6 and 16 per cent for the low-income groups and between 2 and 6 per cent for the middle- and high-income groups.[57]

Thus, these results provide some valuable new information on the two areas that are critical to the efficiency case for equalization. First, it does appear from the evidence that the presence of resource revenues attracts migrants. In other words, people appear to move in response to NFB's. Second, equalization payments tend to retard out-migration, i.e., without equalization, even more persons would have migrated to the resource provinces. On the surface, therefore, this suggests that equalization flows may be enhancing efficiency.

However, it is important that one treats these results with considerable caution. Our principle concern with the estimation procedure is that the rise in energy revenues is also serving as a proxy for the terms-of-trade effect on marginal productivities in the resource regions. To associate <u>all</u> of the in-migration to the west in response to this energy revenue as "fiscal-induced" and none of it as being related to the increase in marginal productivities that are associated with energy price increases is disconcerting. To be sure Winer and Gauthier did attempt, with a set of other variables, to capture these productivity changes but in our opinion much more work in this direction is required before any definitive conclusions can be drawn.

A second concern has to do with just who it is that is migrating. If unemployed easterners are flocking to Alberta in search of work, this cannot be construed as inefficient migration, at least in the way that we have been using the term. In an earlier study, Courchene followed a sample of Canadians through four years of their life, focusing on variables such as location, income and employment experiences.[58] The results for this period (1965-1968) suggested rather conclusively that there were substantial income gains associated with geographical mobility, both in absolute terms and relative to comparable control groups who did not move. It is this sort of information, updated for the 1970s to take account of the burgeoning of resource revenues, that holds the most promise for isolating the degree to which the increased migration to the West can

be viewed as falling into the fiscal-induced or rent-seeking category on the one hand or as being determined principally by market factors on the other.

Nonetheless, the research by Winer and Gauthier has advanced our knowledge of the migration process and does lend some support to the dual notion that NFB's can trigger migration and that an equalization program may inhibit some of this movement.

A quite different approach to isolating the degree of fiscal-induced migration is that by Ken Norrie and Mike Percy.[59] The authors construct a multi-sector model of a small open economy (Alberta), plug in some reasonable parameter values, and use the model to isolate the impact of a 1 per cent increase in the price of energy. In their "base case" they assume that resources are privately owned. Under this assumption a 1 per cent increase in the price of energy will generate <u>only</u> a terms-of-trade effect. Their other specifications incorporate provincial resource ownership and, therefore, also allow for the generation of NFB's in response to the energy price increase. In the base case, a 1 per cent increase in energy prices leads to a 1-10 per cent increase in the labour force in the long run whereas in the simulations that allows for financing of provincial government goods and services out of resource revenues the increase in the labour force varies from 1.72 to 1.87 per cent. If these estimates are to be believed they suggest a very large terms-of-trade impact on labour supply - for example, a 50 per cent increase in the price of energy would, in the long run, call for a 55 percent expansion of Alberta's labour force. Combined with the fiscally-induced component this would suggest a labour force growth of 90 per cent. What we read from these results is that (a) fiscally-induced migration is important, but (b) the terms-of-trade component is also important, so much so that <u>by itself</u> it could easily account for <u>all</u> the recent westward movement of labour.

The authors are quite aware of some of the defects of their model.[60] Nonetheless, the approach is a novel one and contributes further to the information relating to fiscal-induced migration and the role of a system of equalization payments as an aid to efficiency.

VIII

CONCLUSION

In lieu of a summary, we intend to use the conclusion to address two important issues. First, to what extent has the economic rationale for equalization influenced official policy thinking with respect to equalization payments. Second, to what extent can Canada's new equalization formula be viewed as a move toward enhancing efficiency.

The Official View of Equalization

In a recent paper Douglas Auld and Lorraine Eden suggest that the wording of the new constitutional provision with respect to equalization represents an important shift toward incorporating the spirit of the economic approach to equalization.[61] They begin their argument by recalling the phrasing associated with the National Adjustment Grants: the grants were 'to enable a province to provide adequate services (at the average Canadian standard) without excessive taxation (on the average Canadian basis).'

Not surprisingly, the calculations underlying these grants in the Rowell-Sirois Report did focus on basic services and unduly high tax rates. Indeed, the Report went so far as to say that a province would be free to offer levels of service above the basic levels if it wished to tax itself accordingly. However, this "excess" spending should not enter the calculations to determine the level of the national adjustment grant.

On the other hand, an approach to equalization more in line with the economic rationale would have little reference either to basic services or to unduly high tax rates. The evaluation of the Canadian system toward comprehensive equalization of all revenue sources can be interpreted as a move toward an economic interpretation.

Further to this point, Auld and Eden make much of the manner in which the original version of the constitutional provision on equalization differed from that which was eventually enshrined. As elaborated in the previous chapter the earlier version read 'Parliament and the Government of Canada are committed to taking such measures as are appropriate to ensure that provinces are able to provide the essential public services... without imposing an undue burden of provincial taxation'. This is to be contrasted with the enshrined version which reads 'Parliament and the Government of Canada are committed to the principle of making equalization payments to ensure that provincial governments have sufficient revenues to provide reasonably comparable levels of public services at reasonably comparable levels of taxation'. Auld and Eden interpret the shift in wording from 'essential public services' and 'undue burden' and toward 'reasonably comparable' levels of services and taxation as evidence of an acceptance of an economic approach to equalization.

While it is undoubtedly the case that policy officials are now far more aware of the efficiency arguments for equalization, we have some trouble with the Auld and Eden interpretation. It seems to us that the notion of "basic services" is still very much part of the rationale for equalization. For example, the selection of a new standard for equalization (initially Ontario and later the five-province standard) for the 1982-87 version of equalization explicitly excludes Alberta. In our view the reason for this exclusion relates to the fact that the soaring revenues of this province allow it to provide a level of services in excess of what is offered by the 'representative' province. Moreover, the fact that resource revenues in the new formula generate almost no equalization flies in the face of the efficiency argument for equalization since it is precisely these revenues that account for the wide variance in provincial NFB's. Finally, it is important to note that in the summer, 1980, negotiations relating to the constitution one of the few items (perhaps the only item) on which there was unanimous agreement was that the principle of equalization ought to be enshrined in the constitution. We find it difficult to believe that this unanimity was motivated by a concern for efficiency. Our hunch was that it was rooted more in the nationhood or constitutional rationales for equalization.

Efficiency and the Existing Equalization Program

The traditional argument relating to equalization is that it runs counter to efficiency because it inhibits out-migration. The more recent view with respect to efficiency is that retarding out-migration is desirable in the face of large NFB's. In a recent article, John Dales notes that both these views tend to be presented in terms of what he refers to as 'one-distortion' models.[62] Both approaches are correct on their own terms. The argument that equalization is efficiency retarding arises in a setting where provincially supplied goods and services are produced under diminishing returns and sold at a tax price which equates their marginal cost with their marginal benefit. The effect of equalization is to subsidize public services in 'poor' regions thereby keeping the tax price of public output lower than its marginal benefit and reducing the incentive to migrate. Dales calls this the 'Maritimes model.' At the opposite pole is the 'Alberta model' where energy royalties are used to subsidize taxes - in effect there exists a 'Royalty Subsidy' that encourages in-migration to Alberta. Dales notes that what much of the current thinking with respect to equalization does is

> ...marry the two One-Distortion models of the 'Maritimes' and 'Alberta,' and produce one Two-Distortion model of 'Canada' in which the two subsidies exactly offset one another, thereby creating the same economic Utopia that occurs in a No-Distortion model. We may then conclude that the Equalization policy is 'justified' by the Royalty distortion, and that Ottawa cleverly neutralizes Edmonton. Or we may prefer to look at things the other way around and conclude that the Royalty policy is 'justified' by the Equalization distortion, Edmonton having cleverly neutralized Ottawa.[63]

The problem with this approach is, as Dales notes, that it is based on the assumption of a two-region model. Add a third region, call it Ontario, and the analysis no longer holds. The implications of the Maritimes model is that there will be too little migration from the Maritimes to Ontario. The implication of the Alberta model (where, for political reasons, Ontario cannot be a recipient of equalization) is that there will be too much migration from Ontario to Alberta. Recall from Part II of the study that on the basis of the formula Ontario qualified for equalization in each and every year of the 1977-82 arrangements, but did not receive any payments. When one adds to this the fact, also highlighted in Part II, that Ontario bears an excessive share of financing the resource-related equalization it becomes clear that the existing equalization program does

not have much claim to be efficiency enhancing. Hence, it is very important not to fall into the trap of focusing only on the Maritimes and Alberta (or more generally the have-not provinces and the resource-rich provinces) when evaluating the efficiency aspects of equalization.

In summary, therefore, while the analysis of this paper may not lead to tidy and definitive statements relating to the role of equalization, it does nonetheless attempt to provide important further perspectives relating to the economic rationale underlying equalization.

NOTES

* It is a pleasure to acknowledge the many comments we received on earlier drafts of this paper. In particular, we wish to thank Robin Boadway, Frank Flatters, Douglas Clark, Anthony Scott, John Graham and Sam Bucovetsky. It is certain that some or all of them will still find parts of the analysis wanting.

1 Kenneth C. Wheare, Federal Government, fourth edition (London: Oxford University Press), 1964. This quotation appears as an introduction to the intergovernmental finance chapter of Wallace Oates, Fiscal Federalism (New York: Harcourt Brace Jovanovich, Inc.), 1972.

2 There were, or course, other reasons for allocating indirect taxes to the federal level, e.g. to preserve an internal common market.

3 Although conditional grants and the transfers of expenditures functions to the federal government may be similar from a vertical balance perspective, they might well have very different horizontal impacts. That is, the incidence of the benefits across provinces of conditional grants may differ from the benefits of direct federal expenditures. The interrelation between vertical and horizontal balance will be explored further in the next paragraph.

4 For an elaboration of this theme see Thomas J. Courchene, 'Analytical Perspectives Relating to the Canadian Economic Union' in Michael Trebilcock, Robert Prichard, Thomas Courchene and John Whalley (editors), Federalism and the Canadian Economic Union (Toronto: University of Toronto Press) 1983, Chapter 2. See also Donald V. Smiley, Canada in Question: Federalism in the Eighties (Toronto: McGraw-hill Ryerson) 1980, various chapters.

5 A.D. Scott, 'The Economic Goals of Federal Finance', Public Finance, Vol. xix, No. 3, 1964, pp. 252-3.

6 Ibid., p. 252.

7 Government of Canada, Report of the Royal Commission on Dominion-Provincial Relations, Book II (Ottawa: King's Printer), 1939, p. 125.

8 Ibid., p. 78. Emphasis added.

9 Ibid., p. 84.

10 Ibid., p. 127.

11 Ibid., p. 80.

12 Ibid., p. 79.

13 Ibid., p. 80.

14 Ibid., p. 79.

15 John Graham, 'Equalization and Canadian Federalism', Public Finance number 2, (1982), part III.

16 Much of the analysis draws on recent literature, principally Robin Boadway and Frank Flatters, Equalization in a Federal State: An Economic Analysis (Ottawa: Economic Council of Canada), 1982. Other papers which have contributed to this literature include L.S. Wilson, M.B. Percy and K.H. Norrie, 'The Economics of Equalization Payments', mimeo (Edmonton: Department of Economics, University of Alberta), 1981, and L. Eden, 'Fiscal Equity and Equalization Payments', paper to the Canadian Economic Association Annual Meeting (Halifax, 1981).

17 NFB's should also include any differences across provinces that arise from the operations of the federal government. We assume that no such differences exist.

18 This assumes that the rents are not capitalized. More on this important issue later.

19 Boadway and Flatters, op. cit., p. 52.

20 L.S. Wilson, M.B. Percy and K.H. Norrie, op. cit., p. 13. The term 'differential fiscal residuals' can, for our purposes, be assumed to be identical to differential NFB's.

21 The assumption that preferences for public goods are identical across the citizenry is important to this conclusion. For example, if the demand for public goods rises with income, then the transfers should go to the richer provinces on efficiency grounds. See Frank Flatters, V. Henderson and P. Mieszkowski, 'Public Goods, Efficiency and Regional Fiscal Equalization', Journal of Public Economics, Vol. 3, No. 2 (1974), pp. 99-112.

22 Wilson, Percy and Norrie, op. cit., p. 15.

23 Boadway and Flatters, op. cit., p. 54.

24 D.A.L. Auld and L.B. Eden, 'Equalization and the Canadian Constitution', Government and Policy, forthcoming.

25 Boadway and Flatters, op. cit., p. 57.

26 John F. Graham, 'Fiscal Adjustment in a Federal Country', in Intergovernmental Fiscal Relations, Canadian Tax Papers, No. 40, (Toronto: Canadian Tax Foundation), 1964, p. 5. Emphasis added.

27 Ibid., p. 6.

28 Ibid., p. 17. Emphasis added.

29 Ibid., p. 17. Emphasis added.

30 This point is adopted from Auld and Eden, op. cit.

31 Interestingly enough, on this issue John Graham parts company with Boadway and Flatters and others who recommend net schemes. His reason is along national unity lines. This is hardly surprising since the national unity concern is embodied directly in his definition of fiscal equity (see footnote 15). See John Graham, "Comment" in R.M. Bird (editor) Fiscal Dimensions of Canadian Federalism (Toronto:

Canadian Tax Foundation) 1980, pp. 45-52.

32 See Robin Boadway and Frank Flatters, 'Efficiency, Equity and the Allocation of Resource Rents' in Charles E. McLure Jr. and Peter Mieszkowski, (editors) Fiscal Federalism and the Taxation of Natural Resources (Toronto, D.C. Heath and Company) 1983, pp. 99-124.

33 Douglas H. Clark, 'Note on Equalization and Resource Rents,' in A.D. Scott (ed.), Natural Resource Revenues: A Test of Federalism (Vancouver: University of British Columbia Press), 1976, p. 110.

34 Thomas J. Courchene and James R. Melvin, 'Energy Resources: Consequences for the Rest of Canada,' Canadian Public Policy - Analyse de Politiques (special supplement on the Heritage Savings and Trust Fund), 1980, pp. 202-3.

35 This section is based on Courchene and Melvin, op. cit.

36 John Dales, 'Distortions and Dissipations' Canadian Public Policy/ Analyse de Politiques Vol. IX, No. 2 (June 1983) pp. 257-64.

37 Section 125 is often referred to as the provision whereby the 'Crown cannot tax the Crown.' The actual wording of section 125 is: 'No Lands or Property belonging to Canada or any Province shall be liable to taxation.'

38 W.D. Gainer and T.L. Powrie, 'Public Revenue from Canadian Crude Petroleum Production,' Canadian Public Policy/Analyse de Politiques, Vol. 1, No. 1 (Winter 1975), pp. 1-12.

39 R. Boadway, F. Flatters and A. LeBlanc 'Revenue Sharing and the Equalization of Natural Resources.' Canadian Public Policy/Analyse de Politiques Vol. IX, No. 2 (June 1982), p. 177.

40 This measure is not without its difficulties. See Boadway and Flatters, Equalization in a Federal State, op. cit., p. 12.

41 Boadway and Flatters, 'Efficiency, Equity and the Allocation of Resource Rents...' op. cit., p. Emphasis added.

42 Boadway and Flatters, Equalization in a Federal State op. cit., p. 53. Emphasis added.

43 K.H. Norrie, M.B. Percy and L.S. Wilson, 'Financing Confederation: Principle of Practices of Equalization' Canadian Public Policy/Analyse de Politiques VIII.3 (Summer, 1982), p. 291.

44 These definitions are adopted from Boadway and Flatters, 'Efficiency, Equity and the Allocation of Resource Rents' op. cit., p. 107.

45 Scott, op. cit., p. 254.

46 L.S. Wilson, M.B. Percy and K.H. Norrie, 'The Economics of Equalization Payments' mimeo. Department of Economics, University of Alberta (June, 1981), p. 13.

47 Wallace E. Oates, 'Tax Effectiveness and Tax Equity in Federal

Countries: Commentary' forthcoming in the conference volume of the International Seminar in Public Economics (Charles McLure, editor).

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55 Economic Council of Canada, Financing Confederation, op. cit., p. 141.

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